

**REMARKS**

Claims 8-22 were pending in the present application. Claims 1-7 were previously canceled without prejudice. In the above amendments, claim 22 is amended and new claims 23-27 are added. Thus, claims 8-27 are now pending for reconsideration. Applicants believe that the present application is now in condition for allowance, which prompt and favorable action is respectfully requested.

**Summary of the Office Action**

In response to a request for continued examination under 37 C.F.R § 1.114, prosecution in this application was reopened and Applicants' amendment filed on February 1, 2008 was entered. The Office Action issued June 3, 2008 withdraws allowance of claims 8-19 and issues new rejections. In the Office Action, claim 22 is objected to as being improperly dependent on claim 8 or duplicative of claim 10; claims 12 and 13 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,421,527 to DeMartin *et al.* ("DeMartin"); claims 8-11 and 15-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,905,742 to Chennakeshu *et al.* ("Chennakeshu") in view of U.S. Patent Application Publication No. 2003/0002518 to Shibutani ("Shibutani"); and claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0072395 to Jia *et al.* ("Jia") in view of Chennakeshu. Additionally, the Office Action objects to claims 14 and 19 depending from a rejected base claim, but indicates that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner states that claims 20-22 are allowed over the prior art subject to overcoming the objection to claim 22.

Applicants wish to express their appreciation to the Examiner for indicating that claims 14, 19, and 20-22 are allowable or recite allowable subject matter. The rejections and objections are respectfully traversed in light of the foregoing amendments and the following remarks.

**Response to Objection to Claim 22**

In accordance with the Examiner's suggestion, claim 22 is amended to depend from claim 20. Accordingly, Applicants respectfully request the withdrawal of the objection to claim 22.

**Response to Rejections of Claims 12 and 13**

Claims 12 and 13 are rejected under 35 U.S.C. § 102(e) as being anticipated by DeMartin. While the Examiner has withdrawn the previous allowance of claims 8-19 in view of the newly discovered references, Applicants respectfully submit that DeMartin is not newly discovered. In an office action dated May, 10, 2007, the Examiner rejected claim 7 (now canceled) under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 4,633,411 to Bliss *et al.* in view of DeMartin, and then on page 5 stated that “[c]laims 8-19 are allowable over the prior art.” Thus, the Examiner has already allowed claims 12 and 13 over DeMartin.

In the present Office Action the newly discovered prior art is not applied against claims 12 and 13. Instead, the Examiner applies previously cited DeMartin to reject claims 12 and 13 under 35 U.S.C. § 102(e). The Examiner fails to provide any reasoning as to why the previous indication of allowability over the previously known prior art is withdrawn. Applicants respectfully submit that because the newly discovered prior art is not being combined with DeMartin to reject claims 12 and 13, the newly discovered prior art should not alter the Examiner's previous finding that claims 8-19 are allowable over DeMartin. Accordingly,

Applicants respectfully request that the rejections of claims 12 and 13 under 35 U.S.C. § 102(e) be withdrawn.

Further, Applicants respectfully traverse the rejection of claims 12 and 13, because the claims are patentably distinct over DeMartin. Applicants submit that DeMartin fails to disclose each and every element of the claims. In particular, claim 12 recites, *inter alia*, “receive circuitry operative to receive signals on a reverse link, including a quality message with a parity check, and differential indicators, the quality message periodically providing a quality metric of a forward link, wherein the differential indicators track the quality metric between successive quality messages.” DeMartin fails to disclose this element.

DeMartin discloses “a system is presented that allows one station to communicate with a second station. The station monitors the quality of channels connecting them and adapts their data and error control rates accordingly.” DeMartin, col. 1, lines 48-51. The Examiner cites DeMartin, col. 4, lines 8-31 as disclosing the “receive circuitry operative to receive signals on a reverse link, including a quality message with a parity check.” *See*, Office Action, dated June 3, 2008, p. 3. DeMartin, col. 4, lines 8-31 discloses:

*Speech bits* are divided into classes of decreasing perceptual importance. Each class is then encoded with convolutional codes of appropriate rate (including, possibly, rate 1, i.e., no protection). The first class, Class 0, includes the most important bits. On the up-link frame, *the bits are protected by a Cyclic Redundancy Code (CRC) parity check*. A CRC parity check is computed over the bits of Class 0 to detect any error at the receiver. At the receiver, the received CRC is compared to the CRC computed over the received bits: if they are equal, all bits in Class 0 are assumed to be correct. The down-link channel measurement bit (1 bit) is part of Class 0 and therefore has the CRC protection. With no convolutional encoding and no error detection, we have the codec mode identifier (repetition code) 21a. This identifier 21a is sent as header information and for the example is the repetition code discussed above. We also have the codec mode beacon (1-bit channel) 21c described later. Everything else is channel coded which in this case means that a convolution code with different levels of redundancy for every bit of information is used. This is what the Mobile Station (MS) 11 is transmitting. The channel encoded information 21b, the codec mode header 21a and beacon bit 21c are sent in the frame 21. They are modulated on the RF carrier of the mobile transmitter.

(emphasis added). Thus, DeMartin discloses encoding the speech bits with a CRC parity check protection for transmission, not receiving “a *quality message* with a parity check.” Accordingly, Applicants submit that DeMartin fails to disclose this element of claim 12.

Moreover, the Examiner cites DeMartin, col. 4, lines 48-55 as disclosing the “receive circuitry operative to receive signals on a reverse link, including . . . differential indicators, . . . wherein the differential indicators track the quality metric between successive quality messages.”

*See, Office Action, dated June 3, 2008, p. 4.* DeMartin, col. 4, lines 48-55 discloses:

A suitable moving average of the soft-values is a good estimator of the current Carrier to Interference (C/I) Ratio of the channel, a parameter which is directly connected to the amount of errors introduced by the channel. The aim of the mode selector, for both up- and down-link, is to follow the C/I profile faithfully and quickly enough to allow a good mode adaptation between the two available modes.

The Carrier to Interference (C/I) ratio disclosed in DeMartin is “a parameter which is directly connected to the amount of errors introduced by the channel.” *Id.* Thus, the C/I ratio is itself a quality message. Therefore, DeMartin discloses successive quality messages, but fails to disclose or suggest the “differential indicators, . . . wherein the differential indicators *track the quality metric between successive quality messages.*” (emphasis added). In addition, Applicants submit that the channel grade indicators disclosed in DeMartin col. 6, lines 42-44 do not disclose the differential indicators recited in claim 12, as the channel grade indicators are quality messages indicating “how good the channel is.” DeMartin, col. 6, line 43. Accordingly, Applicants submit that DeMartin fails to disclose these elements recited in independent claim 12.

Accordingly, Applicants respectfully request withdrawal of the rejection of claim 12 under 35 U.S.C. § 102(e).

Similar to claim 12, independent claim 13 recites, *inter alia*, “generating a parity check for each of the quality messages,” as well as “generating . . . differential indicators at a first

frequency, . . . wherein the differential indicators track a quality metric between successive quality messages.” As discussed above with respect to claim 12, DeMartin discloses encoding the speech bits with a CRC parity check protection for transmission. However, DeMartin fails to disclose “generating quality messages and . . . generating a parity check for each of the quality messages.” In addition, DeMartin fails to disclose “differential indicators” of any type. Thus, DeMartin fails to disclose “generating . . . differential indicators at a first frequency, . . . wherein the differential indicators track a quality metric between successive quality messages.” Therefore, Applicants submit that DeMartin fails to disclose each and every element recited in independent claim 13, and accordingly, respectfully request withdrawal of the rejection of claim 13 under 35 U.S.C. § 102(e).

#### **Response to Rejections of Claims 8-11 and 15-17**

Applicants respectfully submit that claims 8-11 and 15-17 are patentably distinct from both Chennakeshu and Shibutani because these references, taken alone or in combination, do not teach or suggest all of the limitations in these claims. In particular, independent claim 8 recites, *inter alia*, “transmitting differential indicators independently of quality messages.” Chennakeshu fails to teach or suggest differential indicators of any type or transmitting said differential indicators at any time.

Chennakeshu discloses adjusting “the complexity of a trellis decoding process based on a current condition of the communication system.” *See*, Chennakeshu, Abstract. To determine the current condition of the communication system, Chennakeshu discloses determining the channel quality using any of a variety of indicators. *See*, Chennakeshu, col. 8, lines 14-43. However, Chennakeshu fails to disclose or suggest differential indicators of any type. Rather, all of the indicators disclosed are indicators of channel quality. Accordingly, Chennakeshu fails to disclose “transmitting differential indicators independently of quality messages.”

Combining Chennakeshu with the teachings of Shibusuhi does not cure this deficiency, because Shibusuhi is silent on this element. Shibusuhi discloses an adaptive algorithm which assigns access terminals to channels based on channel quality. While Shibusuhi discloses detecting an indicator of channel quality, Shibusuhi fails to disclose or suggest differential indicators of any type.

In view of the foregoing, Applicants submit that claim 8 is patentably distinct from Chennakeshu and Shibusuhi, taken alone or in combination. Because claims 9 and 10 depend from claim 8, Applicants further submit that claims 9 and 10 are allowable for at least the same reasons as discussed above with respect to claim 8. Accordingly, Applicants respectfully request that the rejections of claims 8-10 under 35 U.S.C. § 103(a) be withdrawn.

As with claim 8, independent claim 11 recites, *inter alia*, “means for transmitting differential indicators independently of quality messages.” Therefore, for at least the same reasons as discussed above with respect to claim 8, Applicants submit that claim 11 is patentably distinct from Chennakeshu and Shibusuhi, taken alone or in combination. Accordingly, Applicants respectfully request that the rejection of claim 11 under 35 U.S.C. § 103(a) be withdrawn.

As with claim 8, claims 15 and 16 each recite, *inter alia*, “transmitting differential indicators independently of quality messages.” Therefore, for at least the same reasons as discussed above with respect to claim 8, Applicants submit that claims 15 and 16 are patentably distinct from Chennakeshu and Shibusuhi, taken alone or in combination. In addition, since claim 17 depends from claim 16, Applicants submit that claim 17 is allowable for at least the same reasons as discussed above with respect to claims 8, 15, and 16. Accordingly, Applicants respectfully request that the rejections of claims 15-17 under 35 U.S.C. § 103(a) be withdrawn.

**Response to Rejection of Claim 18 under 35 U.S.C. § 103(a)**

Independent claim 18 recites, *inter alia*, “generating differential indicators separately from the quality message.” The Examiner correctly states that the ‘395 published patent application fails to disclose this limitation. *See* Office Action, dated June 3, 2008, p. 9. In order to cure this deficiency, the Examiner combines the teachings of Jia with the teachings of Chennakeshu. However, as discussed above with respect to claims 8-11 and 15-17, Chennakeshu fails to teach or suggest any differential indicators of any type. Thus, neither Jia, nor Chennakeshu, taken alone or in combination teaches or suggests this claim element. Accordingly, Applicants respectfully request that the rejection of claim 18 under 35 U.S.C. § 103(a) be withdrawn.

**Response to Objections to Claims 14 and 19**

The Examiner objects to claims 14 and 19 as being dependent upon a rejected base claim, although the claims would be allowable if rewritten in independent form. Claims 14 depends from independent claim 13, and claim 19 depends from independent claim 18. In the foregoing remarks Applicants submit that both claims 13 and 18 are in condition for allowance. Accordingly, Applicants respectfully request withdrawal of the objection to claims 14 and 19.

**New Claims**

New claims 23-27 are fully supported by the specification. In particular, new claims 23-27 are supported by the originally filed claims 1-19 as the new claims recite similar subject matter written in the “Means-plus-function” and “Beauregard claim” formats. Support for the “computer-readable medium” subject matter is provided particularly in paragraph [0074] of the published application (U.S. Patent Publication 2003/0161285). Applicants respectfully submit that new claims 23-27 are allowable.

## CONCLUSION

In view of the foregoing, Applicants submit that all pending claims, claims 8-27, in the application are in condition for allowance. Accordingly, reconsideration and allowance of the present application are respectfully requested. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

If it is determined that additional fees are due, the Commissioner is hereby authorized to charge payment of any fee(s) or any underpayment of fee(s) or credit any overpayment(s) to Deposit Account No. 17-0026. If necessary, Applicants request, under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application and to charge the fees for a large entity under 37 CFR 1.17(a).

Respectfully submitted,

Dated: September 3, 2008

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